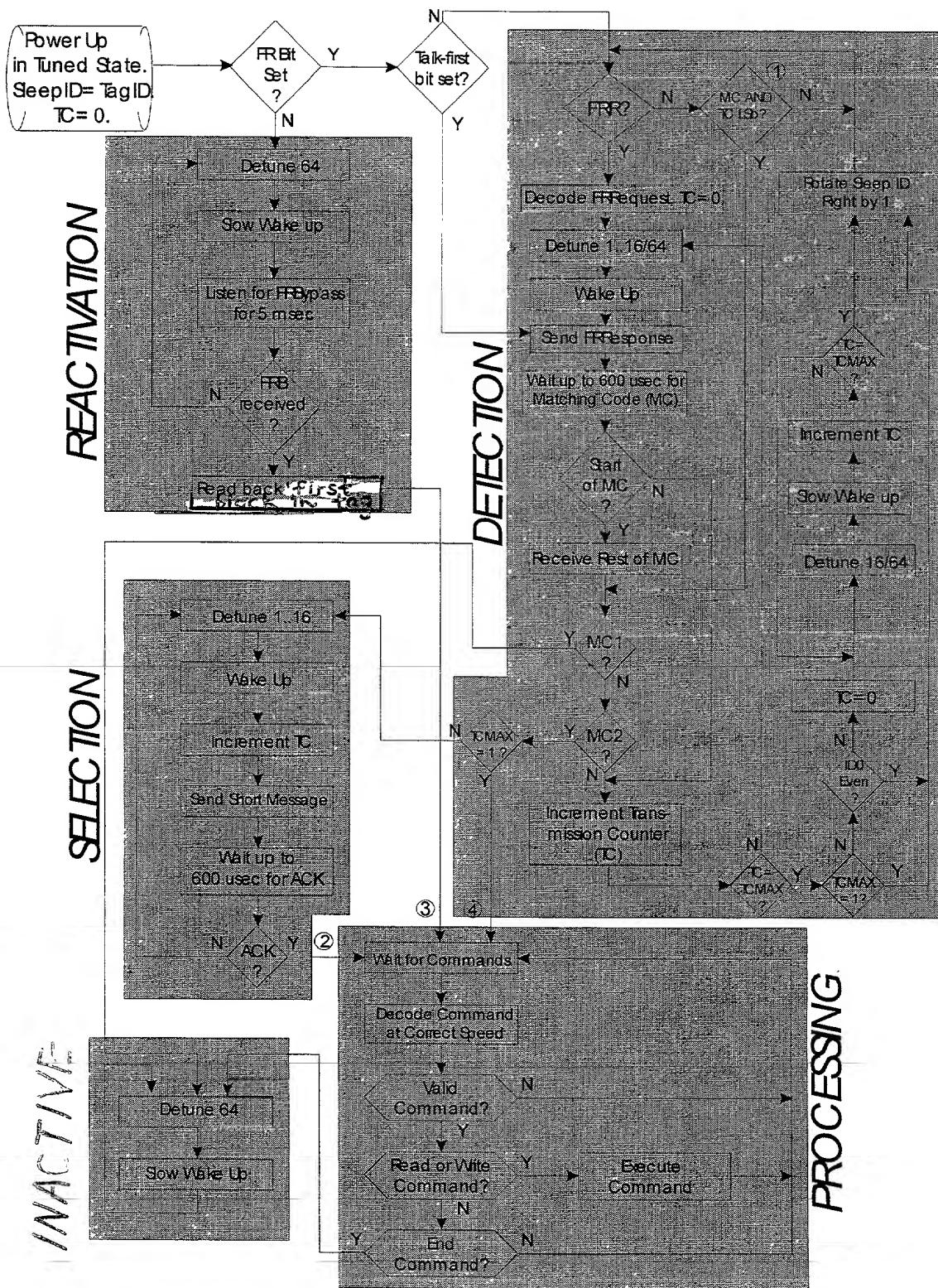
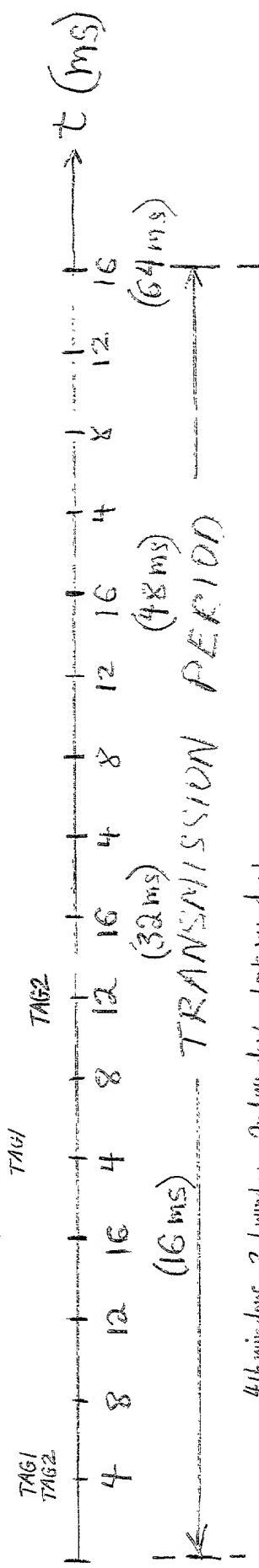


## Anti-collision flowchart



# IEEE 802.11 EDCA

↳ 1st cycle → 2nd cycle → 3rd cycle → 4th cycle



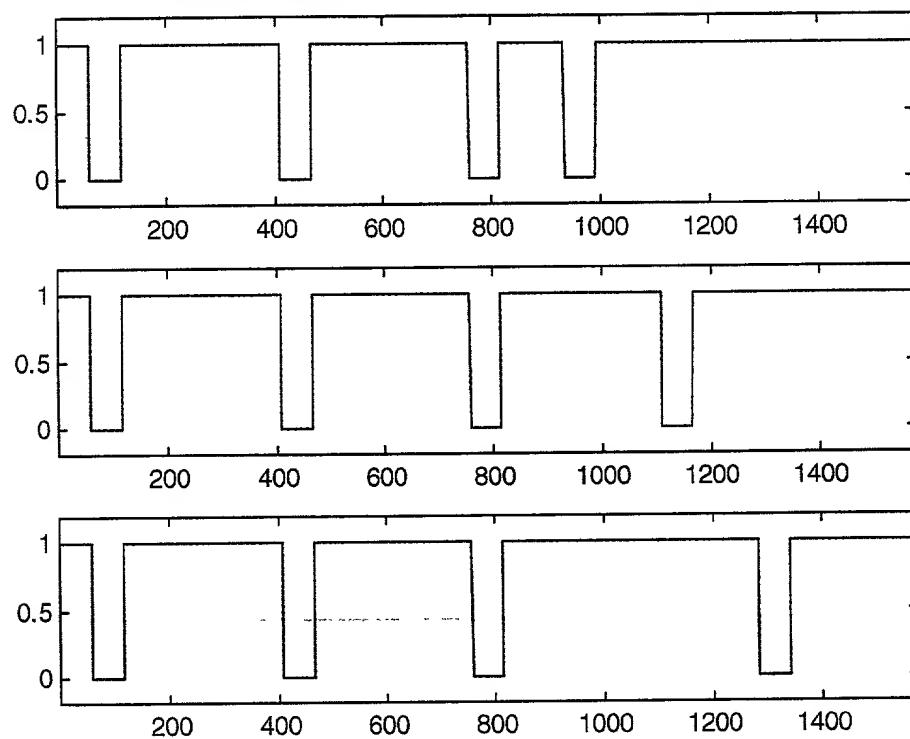
4th window		3rd window		2nd window		1st window	
0	4	0	4	0	4	0	4
1	2	1	2	1	2	1	2

TAG 1 :  
TAG 2 :

↳ Same Wake-up slot (Collision)  
↳ different Wake-up slots (no collision)

FIG. 3A

FRR,normal speed, TS=1,TCmax=(from top to bottom)1,2,4



FRR,fast speed, TS=1,TCmax=(from top to bottom)1,2,4

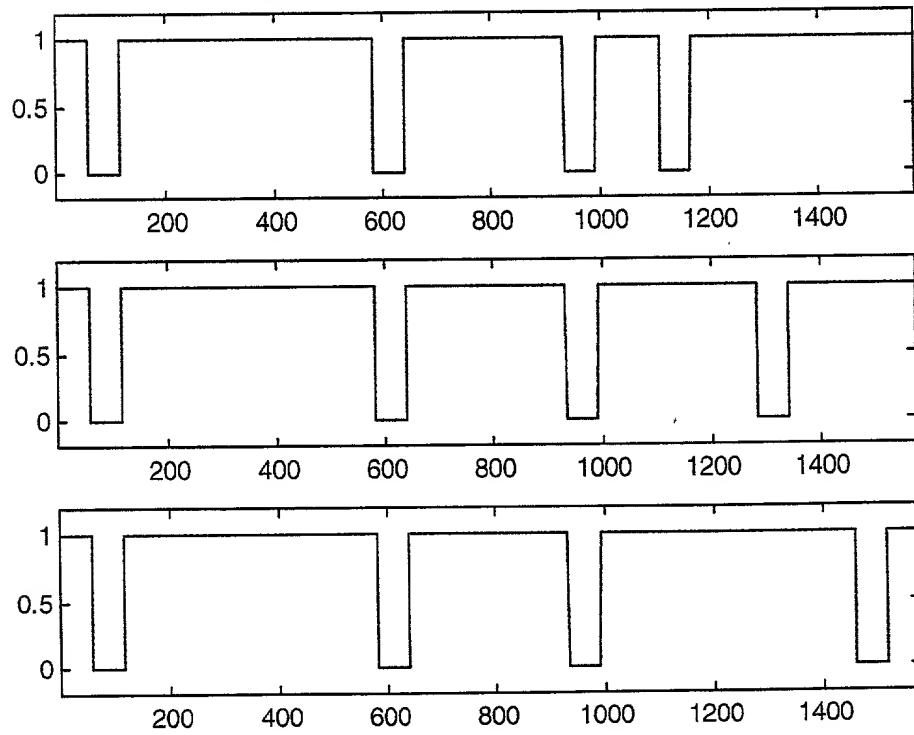


FIG. 3 B

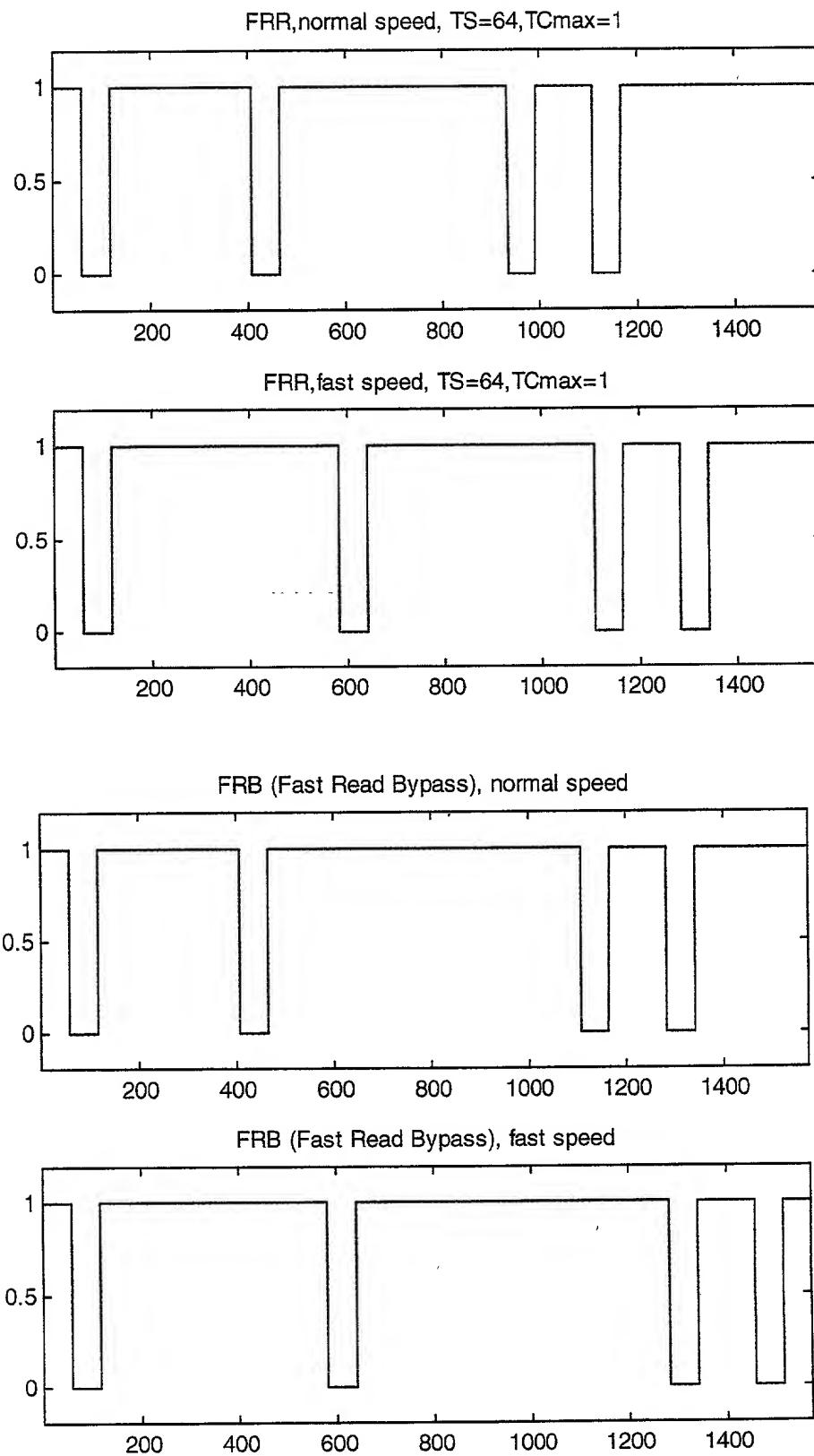


FIG. 3 C

“Match” code = Tag ID bit range a:b
[4(TC+1)+3]modulo32:[4TC]modulo32

FIG. 4

Example : Tag ID = \$825FE1A0

TC	“Match”	ACK
0	\$A0	\$1
1	\$1A	\$E
2	\$E1	\$F
3	\$FE	\$5
4	\$5F	\$2
5	\$25	\$8
6	\$82	\$0
7	\$08	\$A

FIG. 5

Acknowledge = Tag ID bit range a:b

[4(TC+2)+3]modulo32:[4TC+8]modulo32

FIG. 6

Timeslots	Wake-up slot = Tag ID bit range a:b
16	$[[4(TC+1)-1]\bmod 32: [4TC]\bmod 32]$ XOR TC LSb
64	$[[4(TC+1)+1]\bmod 32: [4TC]\bmod 32]$ XOR TC LSb

FIG. 7

Example: Tag ID \$825FE1A0

TC	Relevant Number		Sleep Time 16		Sleep Time 64		Sleep Time 16 semi-inv.		Sleep Time 64 semi-inv.	
Tag ID \$825FE1A0								Wake-up slot		
0	\$A0	b1010 0000	\$0	0	\$20	32	\$0	0	\$20	32
1	\$1A	b0001 1010	\$A	10	\$1A	26	\$5	5	\$25	37
2	\$E1	b1110 0001	\$1	1	\$21	33	\$1	1	\$21	33
3	\$FE	b1111 1110	\$E	14	\$3E	62	\$1	1	\$01	1
4	\$5F	b0101 1111	\$F	15	\$1F	31	\$F	15	\$1F	31
5	\$25	b0010 0101	\$5	5	\$25	37	\$A	10	\$1A	26
6	\$82	b1000 0010	\$2	2	\$02	2	\$2	2	\$02	2
7	\$08	b0000 1000	\$8	8	\$08	8	\$7	7	\$37	55

FIG. 8